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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,323	07/15/2004	Kensuke Fujii	04853.0115	7887

22852 7590 11/16/2007  
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WASHINGTON, DC 20001-4413

EXAMINER
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KRECK, JOHN J

ART UNIT	PAPER NUMBER
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3672

MAIL DATE	DELIVERY MODE
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11/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/501,323

Applicant(s)

FUJII ET AL.

Examiner

John Kreck

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,7 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,7,11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The amendment dated 10/18/07 is entered.
2. Claims 1, 2, 6, 7, and 11-18 are pending.

Applicant's amendment has overcome the 102 rejections.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6, and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhykerd, et al. (Impact of bulking agents, forced aeration, and tillage on remediation of oil-contaminated soil) in view of "garden Series Basics Choosing a Soil Amendment".

Rykerd describes the method including adding a gas phase rate increasing inorganic soil-improving material (vermiculite, page 281, 1<sup>st</sup> paragraph); mixing by agitation, without aerating by introducing injected air (e.g. page 280, last paragraph; "tillage"), while utilizing microbes already present in the soil (page 280, second to last paragraph) .

Rhykerd lacks the newly claimed perlite. Rhykerd teaches vermiculite, in combination with a low clay soil (page 280, second column, third paragraph).

“Gardening” describes soil amendments for improving soil. The document teaches that perlite is useful for high clay soils in place of vermiculite. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Rhykerd process to have included perlite as called for in amended claim 1; for use in high clay soils.

RE independent claim 6: Rykerd describes the method including adding a gas phase rate increasing inorganic soil-improving material (vermiculite, page 281, 1<sup>st</sup> paragraph); mixing by agitation, without aerating by introducing injected air (e.g. page 280, last paragraph; “tillage”), and degrading utilizing microbes already present in the soil (page 280, second to last paragraph).

Rhykerd lacks the newly claimed perlite. Rhykerd teaches vermiculite, in combination with a low clay soil (page 280, second column, third paragraph).

“Gardening” describes soil amendments for improving soil. The document teaches that perlite is useful for high clay soils in place of vermiculite. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Rhykerd process to have included perlite as called for in amended claim 6; for use in high clay soils.

RE claims 11-14:

Rhykerd lacks explicit disclosure of using the described process to treat chlorinated hydrocarbons. See, however see page 280, first sentence; where it is

indicated that similar processes are useful to treat soil contaminated with trichloroethylene.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Rhykerd process on soil contaminated with chlorinated hydrocarbons as called for in claims 11 and 13, and trichloroethylene as called for in claims 12 and 14.

4. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhykerd, et al. (Impact of bulking agents, forced aeration, and tillage on remediation of oil-contaminated soil) and "gardening series" as applied to claim 1 and 6 above, and further in view of Glaze, et al. (U.S. Patent number 5,593,888)

Rhykerd differs from the invention claimed in claims 2 and 7 in that Rhykerd fails to teach the microbes added to the soil. Rhykerd thus fails to meet the claimed "degradation microbes are added to the contaminated soil while not being contained by the inorganic soil-improving material" and "the degradation microbes and the inorganic soil-improving material are separately added to the contaminated soil."

Glaze (e.g. 10:62-11:2) describes the adding of bacteria. One of ordinary skill in the art would have understood that adding specialized bacteria would have the advantage of speeding remediation of contaminants for which indigenous bacteria are deficient. Glaze (e.g. 10:36 and 29:29) also teaches separate and subsequent addition of bacteria. One of ordinary skill in the art would have understood that the bacteria would distribute better if added separately.

In light of the teachings in Glaze, it would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Rhykerd process with microbes added to the contaminated soil while not being contained by the inorganic soil-improving material as called for in claim 2; and microbes and inorganic soil improving material separately added to the contaminated soil as called for in claim 7.

### ***Response to Arguments***

Applicant's arguments filed 10/12/07 have been fully considered but they are not persuasive.

Applicant has based the arguments for patentability on the inclusion of perlite in the independent claims. It is notable that applicant has made no arguments concerning any of the other claim limitations

Applicant has argued that one of ordinary skill in the art would not be motivated to make the proposed combination. Applicant alleges that since Gardening Series teaches that vermiculite is not good for clay soils, one would not be motivated to use perlite in fine sandy loam. The rejection is based on the teaching in Gardening Series that perlite is superior for clay soils; and one of ordinary skill in the art would have found it obvious to have used perlite, for treatment of high clay soils.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

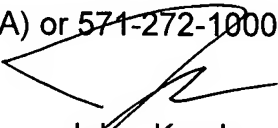
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is 571-272-7042. The examiner can normally be reached on Mon-Fri 6am-3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John Kreck  
Primary Examiner  
Art Unit 3672

8 November 2007